

Request to Approve the Center for Patient, Family, and Community Engagement in Chronic Care Management

Descriptive Information

- Name of Center: Center for Patient, Family, and Community Engagement in Chronic Care Management (CCCM)
- Programs involved:
 - University of Nebraska Medical Center Colleges of Nursing, Medicine, Pharmacy, Public Health, Dentistry, Allied Health Professions, and Graduate Studies; Fred & Pamela Buffett Cancer Center; and the Munroe-Meyer Institute for Developmental Disabilities
 - Collaborate and develop new initiatives with Nebraska Medicine, University of Nebraska Omaha, University of Nebraska Lincoln, and University of Nebraska Kearney.
- Other programs offered in this field by UNMC/NU: None.
- Administrative unit for the center: University of Nebraska Medical Center (UNMC) College of Nursing (CON)
- Physical location, if applicable: Space has been assigned on both the Omaha and Lincoln campuses of the UNMC CON.
- Proposed Implementation date: Upon final approval.

1. Purpose of the Center

Vision of the Center: To become a world leader in advancing research that can strengthen patient, family, and community engagement in management of chronic conditions.

Mission of the Center: The CCMC will bring together scientists, clinicians, educators, and consumers to improve the safety, quality, and efficiency of self-management of chronic conditions by harnessing the power of newly emerging mobile, wearable, and online technologies.

History: The UNMC CON developed a Center for Cardiovascular Studies in August 2009 after receiving a Developmental Center Grant (P20 grant mechanism) from the National Institutes of Health, National Institute for Nursing Research. The primary purpose of the P20 Center was to enhance and expand the infrastructure within the CON necessary to conduct interdisciplinary health promotion/disease prevention for cardiovascular research in rural settings using technology. As a result of the P20, faculty in the CON learned how to manage and direct a center. Faculty developed the essential processes and techniques required for a vibrant center and developed the staff that are essential for the transition to a new Center. Expertise has been gained in the use of common data elements across multiple pilot studies, recruitment of individuals living in rural areas of Nebraska, and in the use of technology to deliver self-management interventions and monitor outcomes in chronic conditions.

Based on the CON experience and lessons learned, the leadership and senior researchers determined that the College is well situated to make the Center model more inclusive of

other chronic health problems and scientists across UNMC and other University of Nebraska campuses. This Center will be built on the success of the earlier National Institutes of Health grant-funded center, but positioned for expansion and new areas of emphasis.

Goals: The goals of the Center are to:

- expand research resources to plan, promote, and support self-management research in patients, families, and communities to prevent and manage chronic health care conditions;
- expand the number of interdisciplinary, cross-campus externally funded studies focused on self-management support in patients, families, and communities experiencing chronic conditions or at high risk for chronic conditions;
- develop scientists at UNMC and in the University of Nebraska system with expertise in clinical and translational methods to support the discovery, dissemination, and implementation of evidence-based self-management strategies in typical community and clinical practice;
- accelerate the use of technologies for studies focused on patient, family, and community engagement in self-management for chronic conditions (technologies for measuring outcomes or delivering strategies/interventions) in urban, rural and underserved populations;
- provide the research infrastructure and a home for PhD and Doctor of Nursing Practice (DNP) students to be involved with interdisciplinary team science projects for development of their research and evidence-based practice skills; and
- plan for and develop sustainability of the center by building a portfolio of research, dissemination, and implementation science initiatives in collaboration with university, clinical, and community partners.

These goals are consistent with the UNMC strategic plan in that they are focused on improving health disparities, enhancing collaborative research, and improving overall health of the region

The Center is positioned to expand the focal areas to discovery, dissemination, and implementation of evidence based strategies focused on patient, family, and community engagement activities such as partnerships and collaborations essential to the management of chronic care. This Center will focus on patient-centered research related to: scalable and practical health promotion, illness prevention, and chronic disease self-management interventions that can be adopted and delivered in a wide variety of contexts; bio-behavioral factors that support adherence to medical management and healthful lifestyle behaviors for patients living with chronic conditions—with an explicit focus on health equity; cost-effective strategies for prevention and treatment of chronic conditions; and the process of translating evidence from discovery (efficacy, effectiveness) to dissemination (evidence-based policy, program, and practice uptake), and to sustainable implementation (delivery of evidence-based policy, program, and practices with a consistent and high level of fidelity) of self-management behaviors for individuals, families, and communities concerned with chronic conditions and presence of multiple comorbidities; and the use of technology to deliver self-management interventions or monitor care in both rural and urban populations where lack of access to care is a concern. Because the movement of evidence-based strategies from discovery to implementation is influenced by a broad range of factors across the ecological levels of individuals, families, communities, and health-supporting organizations, the center will also include community-based studies and engage in community-based participatory

research projects that influence chronic conditions through factors such as development and access to community resources.

Not only will this Center provide the infrastructure to expand important areas of research for UNMC, it will also help develop future scientists and faculty members. For example, such opportunities are vital for doctoral nursing education and support the education of doctoral students who may serve as faculty members in the future. Given that the CON has the only PhD in nursing program in Nebraska, and one of only a few Doctor of Nursing Practice programs in the state, it is vital to expand the opportunities for interdisciplinary discovery, dissemination and implementation science for these students. Many of these graduates accept faculty positions in schools of nursing in Nebraska, thereby contributing to solving Nebraska's nursing workforce shortage. Similarly, these opportunities are vital for doctoral students in other disciplines learning to engage in team science and for expanding the capacity of future faculty for translational and implementation science.

To systematically facilitate the development, dissemination, and implementation of evidenced based approaches that address self-management of chronic conditions, the Center will support three levels of clinical science: *Discovery* (efficacy, effectiveness), which expands knowledge in biomedical and behavioral sciences by moving basic scientific discovery to methods and technologies that improve patient care; *Dissemination*, which is the targeted distribution of information and intervention materials to a specific public health or clinical practice audience via multiple communication channels using planned strategies; and *Implementation* science, which is the study of processes, intervention characteristics, and context related to the application of evidence-based program, policy, and practice interventions with a goal of increase health equity through evidence-based practice. Across each of these broad scientific pursuits the Center considers patient engagement as critical for self-management recognizes and will address family needs and community resources to ensure a strong patient-centered partnership for self-management support.

The Center for Patient Engagement in Chronic Care Management (CCCM) is in compliance with criteria in Section 2.11 of the Bylaws of the University of Nebraska Board of Regents:

1. Interdisciplinary partners from UNMC College of Medicine (COM) and College of Public Health (COPH), College of Pharmacy (COP) currently act as committee chairs, mentors, and /or consultants for faculty in the CON. In addition, we have developed strong collaborative initiatives with faculty at the University of Nebraska at Omaha and the University of Nebraska-Lincoln. The new Health Science Education Complex at the University of Nebraska at Kearney and the strengthened collaborative efforts between UNMC and UNK also provide more opportunity for interdisciplinary team science. The Center will also assist with finding mentors and consultants external to UNMC and the NU system to support our research efforts and the efforts of doctoral students and clinical scholars on campus.
2. The multi-departmental, interdisciplinary center will more effectively bring self-management support with chronic care conditions research to urban and rural residents by creating a synergy and efficiency of research not previously visible on the state-wide campus of the UNMC CON.

2. Need and Demand for the Center

A Center is proposed because there would be no department or College that would have the interdisciplinary or transdisciplinary faculty to accomplish the goals of the CCCM. The CCCM will be a center for an interdisciplinary team of scientists to provide leadership, best practices, research, support and/or training focused on improving the management of chronic care. This CCCM will become a hub and provide the infrastructure to support collaboration and team science to build the science in chronic care. We have developed metrics with strategies to become a sustainable center. Our goal will be to increase collaboration with the other campuses at the University of Nebraska. Collaboration across our campuses already exists and the CCCM will only enhance our collaborations. For building science in chronic care management, we propose our center will eventually reduce cost (by consolidating software and training), increase efficiency (centralizing use of technology), improve outcomes (e.g. share common metrics) improve care (e.g. best practice guidelines with implementation science), and provide alignment (e.g. leverage the resources of the center for future programs or grant proposals).

The impact of chronic care. An estimated 133 million United States adults have a chronic disease and nearly 25% of those have two or more chronic diseases.¹ Increasing rates of chronic illness are associated with higher rates of hospitalization and nearly one third of all adults discharged from hospitals are estimated to have four or more chronic illnesses (Steiner & Friedman, 2013). Medicare beneficiaries with six or more chronic conditions have a readmission rate of 25%, compared to 9% for those with one or no chronic conditions.²

Self-management is the process of patients assuming control of their health-related behaviors.³ Ultimately, patients decide what they will eat, if they will exercise, and what medication(s) they will take. As healthcare experiences a paradigm shift from provider-centered to patient-centered care, health care professionals refocus on helping patients manage transitions in levels of care and encouraging collaboration in making informed decisions and developing health-related behaviors to improve their health outcomes.^{3,4} Clinicians can act as health coaches, providing self-management support, collaborating with patients to establish goals, and helping patients develop problem-solving skills to foster self-management of their health care.³

Self-management support programs are one means of improving patient outcomes and reducing hospital readmissions and emergency room visits. Concerns with many self-management support programs, however, are the focus on factors external to the patient and on the use of a "one size fits all" approach in terms of resources and strategies. Lack of consideration for patient attributes such as cognition and patient activation are limitations of current programs that can have a negative impact on efficacy and efficient use of resources.

Successful programs require activated patients who have the knowledge, skills, and confidence necessary to manage their health care and engage in health promotion activities.⁴⁻⁸ Demonstrating confidence, or self-efficacy, is an iterative process. Gaining confidence and becoming engaged are necessary for activation to occur.⁸ Activation exists on a continuum where patients tend to move between levels depending on their health, self-efficacy, willingness to engage in self-management behaviors, and life situations.⁴⁻⁸ Fully activated patients experience better health outcomes, such as physical and psychosocial functioning.⁹

Research has demonstrated that more highly activated patients with chronic care conditions have improved health outcomes and are more likely to self-manage their care and adhere to

recommendations from health care providers.¹⁰⁻¹³ Self-management and adherence to recommendations results in decreased re-hospitalizations. There is also evidence that more educated patients and patients with adequate health literacy are more activated.¹⁴ Thus, both patient activation and cognition should be considered when planning self-management programs.

In summary, effective self-management is essential for optimal patient outcomes in chronic care and evidence-based approaches exist, but have not had widespread dissemination and still have room for improvement.^{15,16} Self-management interventions activate or engage patients to have the knowledge, skills, and confidence, or self-efficacy, to deal with chronic related problems encountered during daily living. Providing patient centered self-management education enables patients to self-identify problems and provides techniques to help them make decisions, take action, and alter behaviors as needed.⁹ A major strength of this Center is interaction and collaboration among disciplines. Maximizing these interactions broadens knowledge beyond discipline boundaries. Support for two pilot studies will position investigators to obtain larger extramural support for full-scale intervention and outcomes studies with interdisciplinary teams that will contribute to the knowledge of how to improve current self-management approaches while also examining the process by which the current evidence-base can be integrated, with high fidelity, in current practices while monitoring patient outcomes with technological advancements.

Use of technology in studies addressing Patient Engagement in Chronic Care Management.

The health care system is shifting from delivery of care in hospitals to delivery of care in the individual's community and home with the use of technology to monitor and visit patients in their home.¹⁷⁻¹⁹ Other shifts in health care include focusing on and being reimbursed for value rather than volume of care and having primary care and prevention as the key drivers of the health care system rather than illness-focused care.^{20,21} In the CON's P20 center, researchers delivered interventions that were found to be effective to improve health outcomes (i.e., weight loss, increased physical activity, etc.) in rural cardiovascular populations using technology. Thus, faculty have a strong track record in delivering interventions to the rural populations of Nebraska, directly in their communities using technologies that link people with caregivers and that promote self-monitoring of health status. Using technology to facilitate patient, family, and community knowledge of health status and feedback to and partnerships with health professionals can contribute to value-based health care and is well aligned with work at UNMC addressing telehealth and use of mobile and wearable technologies. This expanded Center will allow us to examine innovative, technologically-mediated, and patient-centered solutions that translate evidence-based principles into improved patient outcomes across urban and rural Nebraska.

3. Adequacy of Resources

Numerous faculty members and graduate students are already engaged in research and scholarship related to these topics of self-management, chronic care and prevention of chronic conditions, economic analyses of new care delivery models, implementation science, and use of technology to facilitate partnerships between patients, families, communities and health professionals. However, there is no organizational unit to spur collaboration among them. Individuals already involved are listed below, although there are likely to be others who would be interested in affiliating with the Center. Faculty affiliations would not alter faculty members' appointments to their academic colleges or departments.

Affiliate status would provide access to Center resources (such as consultation, grant reviews, technical assistance) and regular communication of Center programs, seminars, and visiting scholar presentations.

Interdisciplinary Faculty Affiliates

College of Nursing

Ann Berger, PhD, RN
Susan Barnason, PhD, RN
Catherine Bevil, PhD, RN
Marlene Z. Cohen, PhD, RN
Mary Cramer, PhD, RN
Kate Fiandt PhD, RN
Kathleen Hanna, PhD, RN,
Julie Houfek, PhD, RN
Bunny Pozehl, PhD, AP-RN
Jana Pressler, PhD, RN
Carol H. Pullen, EdD, RN
Paula Schulz, PhD, RN
Karen Schumacher, PhD, RN
Lynnette Leeseberg Stamler,
PhD, RN
Nancy Waltman, PhD, RN
Bernice Yates, PhD, RN
Lani Zimmerman, PhD, RN

College of Public Health

Li-Wu Chen, PhD
Patrik Johansson, MD, MPH
Jane Meza, PhD
Marsha Morien MA
Risto Rautiainen, PhD
Kendra Schmid, PhD
Mohammad Siahpush, PhD
Fernando Wilson PhD
Paul Estabrooks PhD
Chen, Baojiang PhD
Fabio Almeida, PhD
Jennie Hill PhD

College of Medicine

Department of Family Medicine
Audrey Paulman, MD
Department of Internal Medicine
Debra Romberger, MD
Jennifer Larsen MD
Ted Mikuls, MD
Steve Bonasera, MD
Cyrus Desouza, MBBS
Apar Ganti, MD
Brian Lowes MD
Department of Pediatrics
Lois Starr MD
Shirley Delair
Department of Surgery
Dmitry Oleynikov, MD
Jason Johanning, MD
Michael Moulton MD
Quan Li MD
Aleem Siddique MD
**Department of Neurological
Sciences**
Matt Rizzo MD
Department of Psychiatry
Chris Kratochvil MD
Department of Ophthalmology
Quan Nguyen MD
Vikas Gulati MD
Tanvir Hussain, MDMSc

College of Allied Health

Joseph Norman, PhD
Laura Bilek, PhD
Patricia Hageman PhD
Joseph Siu (Ka-Chun) PhD
Mike Huckabee, PhD

College of Pharmacy

Christopher Schaffer,
PharmD, BCPS
Gary Cochran, PharmD
Don Klepser, PhD
Nebraska Medical Center
Michael Ash, MD

Other NU Campuses

Ali Hesham PhD UNO
Deepak Khazanchi PhD UNO
Byrav Ramamurthy PhD UNL
John Cresswell PhD UNL
Shane Farritor PhD UNL
Mathew Rice PhD UNK

Additional Physical Facilities Needed

No additional physical facilities are needed at this time. Office and storage space are available in the Center for Nursing Science (CNS) building. The CNS building has adequate classroom and conference room space that the CCCM activities can utilize.

Budget Projections

The budget has been projected for five years (see Tables 2 and 3). After that time, the plan is for the Center to be self-supporting through grants, contracts, and fees for research-related services. The CON will contribute 0.30 FTE release time for the Center Director, Lani Zimmerman, PhD, RN, FAAN. Through a combination of currently available institutional funds and guaranteed philanthropic funds, the CON will support a project coordinator for .5 FTE in Year One and 1.0 FTE thereafter, and statistical consulting to assist with data planning and analysis in Years Three through Five. Pilot study grant funds will be provided by the UNMC Vice Chancellor for Research in years Two through Five. Additional funds will be used to purchase software and equipment as needed for studies, particularly mobile and wearable devices to support the focus on technology; visiting scholars; and grant consultation. Please refer to Tables 2 and 3 for further details. The plan for self-sufficiency after five years is based on generating revenues from research services, continuing education, and contracts with businesses and other organizations for implementation services related to the Center's focus, and grants and contracts for research and program evaluation. The CCM will have its own operating account (cost center).

4. Organizational Structure and Administration

Lani Zimmerman, PhD, RN, FAAN, Florence Neidfelt Endowed Professor of Nursing, will serve as the Center Director. Dr. Zimmerman served on the Executive Committee for the CON's P20 and is an accomplished researcher, focusing on understanding the most efficacious and effective strategies for fostering patient and family self-management of chronic conditions. Her work has centered primarily on people with cardiovascular problems and their families, and she has longstanding and extensive scientific collaborative relationships throughout UNMC, UNO, and UNL. As Center Director, she will have a direct reporting relationship to the Dean of the CON and consultative relationships with each of the three associate deans in the CON, reflecting the Center's tripartite focus on education, research, and practice/service.

The Center will be guided by an external Community Advisory Council and an internal Faculty Advisory Committee, comprised of members from all UNMC colleges. Members of the Community Advisory Council will consist of community members, community providers, and interdisciplinary faculty affiliates. The Community Advisory Council will be available to assist the Center in providing advice into the Center activities, thus aiding in the overall development and infrastructure of the Center. The Faculty Advisory Committee will consist of interdisciplinary faculty involved with the Center's activities. The Faculty Advisory Committee will coordinate Center activities, guide development of new resources supporting research, and facilitate interdisciplinary collaboration in the study of self-management in the context of chronic conditions, including management and prevention. Applications for faculty affiliate status will be widely distributed throughout the University of Nebraska Medical Center and the other NU campuses by direct invitation to faculty members already engaged in related research areas.

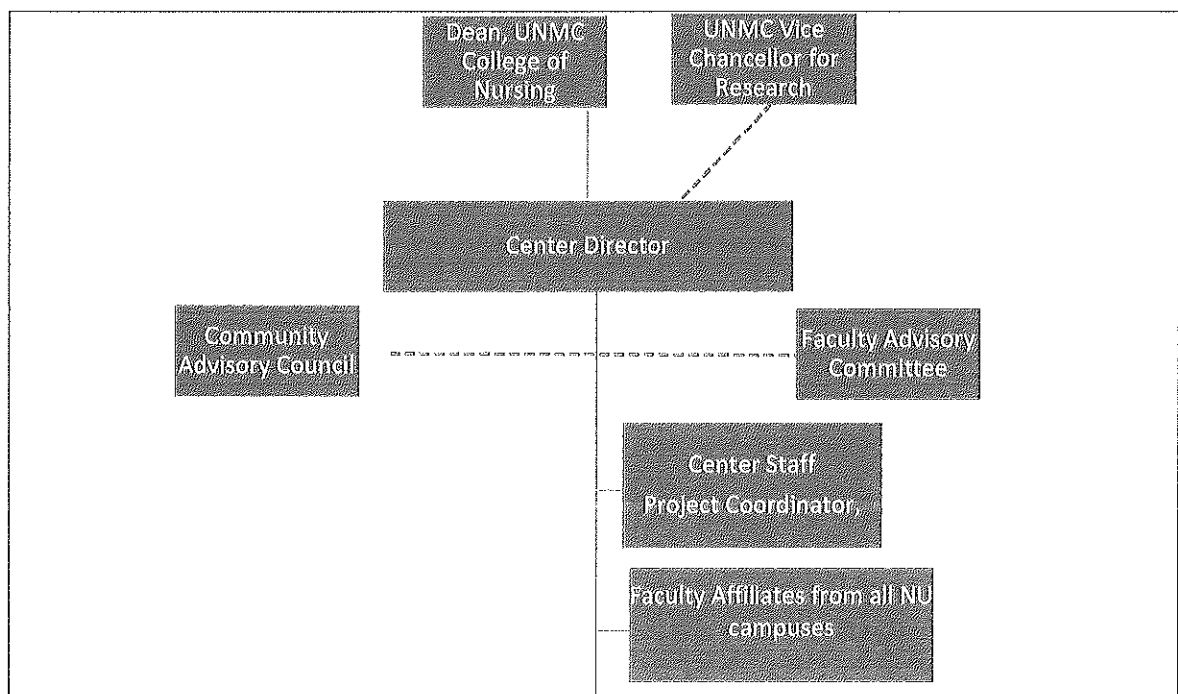
The director will be responsible for providing leadership in convening interprofessional and interdisciplinary faculty affiliates around key topical areas of interest to the group to accomplish the aims of the Center. She will partner with the Dean of the CON and the Center's Community Advisory Council to develop ongoing revenue streams to fund the administrative core of the Center. She will be responsible for ensuring adherence to sound fiscal practices in the management of the Center's budget and will hire key personnel for the administrative core of the Center as it grows. Dr. Zimmerman will provide leadership for the

Community Advisory Council and will oversee the work of the Center Coordinator. The Director will work closely with the CON's Associate Dean for Research and will utilize the resources of the CON's Niedfelt Nursing Research Center for presubmission proposal reviews, additional statistical consultation beyond that available within the Center, grant budget development and post-award monitoring, and manuscript preparation. She and faculty working with the Center may also seek consultation from the Center for Collaboration on Research Design and Analysis (CCORDA) in the UNMC College of Public Health. The Office of the Associate Dean for Transformational Practice and Partnerships in the CON will be available for assistance with translating research results to practice. Dr. Zimmerman will collaborate with the UNMC Vice Chancellor for Research and will provide input to large grant proposals that include components related to patient, family, and community engagement in management of chronic conditions.

The 0.50 FTE project coordinator will be responsible for communications related to the work of the Center, scheduling meetings and recording minutes, organizing presubmission grant proposal reviews in collaboration the Niedfelt Nursing Research Center, organizing visiting scholar events, and all other coordination and administrative support needs of the Center. As these needs increase and funds grow, additional support staff will be added.

Policies and procedures will be developed by the internal faculty advisory committee. Key strategic goals and plans will be developed through broadly based input from internal and external stakeholders and approved the Center's executive council.

The proposed organizational chart is shown below.



5. Partnerships with Business

The potential exists for partnerships with business and industry. A 2013 Deloitte survey of employers' perceptions of health costs and strategies for managing costs ²² found that employers remain strongly concerned about managing costs through design of health plans and encouraging healthy lifestyle changes. The Center can add to the knowledge base of strategies for people with, or at risk for, chronic care conditions to optimally partner with health care providers to reduce risks and promote health. We believe large employer groups in Nebraska will see value in this work and we plan to pursue opportunities for partnerships with them. Given the Center's focus on dissemination and implementation, in addition to discovery, the potential exists for implementing chronic care management programs for employees in collaboration with business and industry, and evaluating the return on investment of programmatic initiatives. Similarly, opportunities exist for health education programs on these topics that can be beneficial to business and industry in promoting healthy workforces.

Examples of possible marketable products:

- Replicable health promotion and health education programs for employee health and wellness;
- Toolkits containing strategies for initiating worksite chronic care management programs;
- Social media sites focused on self-management of chronic conditions;
- Mobile applications for self-management strategies for individuals, families, and communities; and
- Telehealth programs for self-management of chronic conditions.

6. Partnerships with Communities

The potential exists for partnerships with communities with a high prevalence of residents at risk for or with chronic care conditions. There are many potential social media interventions that can be studied to look at changes in the social norms to affect behavioral changes and to support healthy lifestyles that include promotion of exercise and healthful nutrition, tobacco cessation and alcohol moderation, and promotion of safety and prevention of accidents and injuries.

Examples of Potentially Marketable Products:

- Continuing education material for health care providers in communities can assist with the implementation of patient self-management and community engagement skills;
- Community-wide health education programs that emphasize self-management and promotion of healthy lifestyles with particular focus on prevention of the most prevalent chronic conditions;
- Accessible community education materials for individuals and families, through sites such as shopping and recreation areas, community centers, faith communities, and schools.

7. Collaborations with Higher Education Institutions External to the University

Nature of relationships with other colleges and universities-

Center investigators will have opportunities to pursue multisite studies with colleges throughout Nebraska and the Midwest. Additional opportunities could be pursued with Nebraska State and Community Colleges. Given the University of Nebraska's membership in the Big Ten, additional opportunities are available with the fourteen Big Ten schools, including participation by Center investigators in the Big Ten Cancer Consortium.

8. Constituencies to be Served

- Junior faculty beginning a program of research or scholarship in this area
- DNP and PhD students in the College of Nursing
- PhD students in College of Public Health
- PhD students in other UNMC and NU colleges
- Health professions students
- Faculty interdisciplinary teams
- Students and faculty from related disciplines on the other three universities within the University of Nebraska system

Benefits:

- Improved state of the art regarding: self-management care and patient, family, and community engagement skills
- Increased knowledge and skills for health care professional working with patients with chronic care conditions
- Common data elements for studies
- Education on new methodologies for dissemination and implementation science
- Improved health of patients with chronic care conditions
- Increased interdisciplinary collaboration on campus

9. Anticipated Outcomes, Significance, and Specific Measures of Success

An Annual Progress Report, due to the College of Nursing dean and UNMC Vice Chancellor for Research by April 1 each year, will measure progress toward the CCCM aims and reports outcomes, significance, and successes for the overall center, as well as for the research studies. The ultimate outcome of the CCCM is to develop sustainability for the Center and ongoing interdisciplinary research for Patient, Family, and Community Engagement in Chronic Care Management. This sustainability is significant in that it will allow the CCCM to achieve the outcome of improving the health of Nebraskans.

One of the main measures of success is that the Principal Investigators of the pilot projects will obtain future funding to test their interventions on a larger scale, thereby improving the health of many other Nebraskans living in rural and urban areas.

The Evaluation Plan for the CCCM calls for comprehensive, systematic data collection of the Center's activities and outcomes. Specific activities with milestones and outcomes have been developed for each aim of the center. See Table 1. Evaluation methods and activities will be both qualitative and quantitative.

Table 1. Aims, Activities and Milestones/Outcomes

Aim	Activities	Milestones/Outcomes
1. Expand research resources to plan, promote, and support self-management research in patients, families, and communities to prevent and manage chronic health care problems	<ul style="list-style-type: none"> Continue to identify and add to the warehouse of biobehavioral measures and common data elements for chronic care management (e.g., Montreal objective of cognitive assessment (MOCA), health literacy, Patient Activation, etc.) Facilitate consistency in measures and common data elements across studies Facilitate mock review of proposals 	<p>Number of common data elements</p> <p>Number of mock reviews conducted</p> <p>Funding outcomes of proposals undergoing mock reviews</p>
2. Expand the number of interdisciplinary, externally funded studies focused on self-management support in patients, families, and communities experiencing chronic care conditions or at high risk for chronic care conditions.	<ul style="list-style-type: none"> Facilitate investigator applications for small pilot grants focused on patient engagement in chronic care management Seek other UNMC funding for pilot work (e.g. UNeMed, Central States Center for Agriculture Safety and Health, Rural Futures Initiative). Assist with searches for funding announcements for additional external funding for center scientists Collaborate with other UNMC research and clinical centers Collaborate with other NINR-funded nursing centers Form an chronic condition interest group on campus for researchers who are focusing on behavioral change and patient engagement in chronic care (sponsor a monthly seminar) 	<p>By Year 2, have 2 pilot grants funded and by Year 4, an additional 2 pilot grants could be funded. Pilot grants lead to R series NIH grants or equivalent funding</p> <p>Review funding proposals</p> <p>By Year 4, we will have 2 large collaborative R01 external grant proposals submitted with a focus on chronic care management. This will assist the CON in applying for a T32 or a NIH P30 Center Grant or P50 Research Program Project and Center</p> <p># of interdisciplinary colleagues, both internal and external</p> <p>Annual number of funded grants (internal & external) and publications</p> <p># of funded research and publications by members of the research interest group.</p>

Aim	Activities	Milestones/Outcomes
3. Develop scientists with expertise in translational methods to support the discovery, dissemination, and implementation science related to self-management for chronic care conditions.	<ul style="list-style-type: none"> • Facilitate mentoring of Center scientists through manuscript and grant development • Link center scientists with interdisciplinary colleagues and consultation opportunities • Assist with building interdisciplinary research teams. • Offer workshops with campus and external experts on different translational research designs: <ul style="list-style-type: none"> ○ Comparative effectiveness research (CER), community based participatory research (CBPR) with a focus on patient and community engagement. Work with Center for Clinical and Translational Research (CCTR) leadership, UNMC faculty development and staff to plan these workshops. ○ Patient, family and Community Engagement Strategies ○ Conducting an Economic Evaluation e.g. Cost effective Analysis (CEA) and quality of life adjusted years (QALY) ○ Designing randomized clinical trials (RCTs), Dissemination and Implementation Science Studies ○ Work with Center for Collaboration on Research Design and Analysis (CCORDA) to collaborate on projects and training opportunities e.g. pragmatic trials and optimizing trials. ○ Ethical considerations for different research designs and use of technologies. • Provide access to and training in use of software (e.g., data entry, RedCap) and monitoring equipment (e.g. actigraphs, wearable technology) for monitoring outcomes and delivering patient engagement interventions in chronic care management. • Provide grant writing course with an emphasis on developing proposals for "R" NIH mechanism or equivalent. 	<p>Increase # of research teams and on all five campuses</p> <p># of training sessions held</p> <p># of newly formed interdisciplinary research teams</p> <p># of workshops held</p>

Aim	Activities	Milestones/Outcomes
4. Accelerate the use of technologies for studies focused on patient, family, and community engagement in self-management for chronic care conditions (technologies for measuring outcomes or delivering strategies/interventions) in urban, rural, and underserved populations.	<ul style="list-style-type: none"> • Collaborate with campus IT and telehealth experts to develop technologies on UNMC campus that deliver interventions (telehealth, mobile & wearable technologies) and monitor outcomes • Develop services and products that can be marketed in relation to patient, family, and community engagement in chronic care management. • Develop interventions that can be tested in Small Business Innovation grants to increase patient/family engagement in chronic care management • Collaborate with other NU campuses e.g. computer science and engineering • Develop apps for use in research to deliver interventions and monitor outcomes for patient/family engagement in chronic care management. • Develop services and products that can be marketed for in relation to patient/family engagement in chronic care management. 	<p># of funded grants related to use of technology for self-management</p> <p># of services and products</p> <p># and type of research and commercialization ventures with UNL Engineering</p>
5. Provide the research infrastructure and a home for PhD and Doctor of Nursing Practice (DNP) students to be involved with interdisciplinary team science projects for development of their research and evidenced-based practice skills.	<ul style="list-style-type: none"> • Engage doctoral students in nursing and other disciplines throughout UNMC and the NU system in research projects sponsored by the Center. • Publicize research seminars to doctoral students 	<p>Number of doctoral students on research teams</p> <p>Range of disciplines represented on research teams</p> <p>Number of doctoral students attending research seminars</p> <p>Number and titles of doctoral dissertations and capstone projects related to the Center's focus.</p>

Aim	Activities	Milestones/Outcomes
6. Plan for and develop sustainability of the center by building a portfolio of research, dissemination, and implementation initiatives in collaboration with university and community partners.	<ul style="list-style-type: none"> • Create a website for advertising the Center's activities • Consult on projects throughout UNMC • Apply for external center funding • Partner with business partners to disseminate and implement evidence-based science to their institutions. • Partner with business entities to serve as beta testing site for new innovative technologies, apps, etc. for projects related to patient, family and community engagement in chronic care management • Generate income through workshops/short courses. Offer continuing education credit. • Create a business plan to generate revenue through Center services • Seek industry collaboration and funding for projects related to patient, family, and community engagement in chronic care management 	<p>Annual revenues</p> <p>Percent of revenues that support administrative infrastructure</p> <p>Positive income statements within five years for overall Center operations</p>

10. Centrality to Role and Mission of the Institution

The mission of UNMC is:

"We are Nebraska Medicine & UNMC. Our mission is to lead the world in transforming lives to create a healthy future for all individuals and communities through premier educational programs, innovative research and extraordinary patient care".

The vision of UNMC is:

"We are Nebraska Medicine & UNMC. Our mission is to lead the world in transforming lives to create a healthy future for all individuals and communities through premier educational programs, innovative research and extraordinary patient care".

The Center will be focused on *innovative research* and will disseminate and diffuse research findings through UNMC's *premier educational programs* and *extraordinary patient care programs*. Faculty and graduate students will be supported in developing their research and career trajectories, through studying self-management of chronic conditions in individuals, caregivers, families, and at-risk populations. It is strongly aligned with the UNMC mission and vision statements because the focus is on creating a healthy future for individuals and communities. It will meet needs at Nebraska Medicine for new knowledge about ways to more fully enhance the patient experience, link the world class acute and critical care for which Nebraska Medicine is known with innovative community-based programs, and optimize the use of telehealth and mobile and wearable technologies. With newly formed productive research teams, the CON and the other UNMC colleges will be able to recruit graduate students who are interested in pursuing research in patient, family, and community engagement in chronic care management. Through research efforts in the Center, self-management interventions will be developed and tested using state-of-the-art technology to deliver interventions and monitor outcomes. Pilot study investigators who apply for funding through the Center will be junior researchers who are UNMC faculty members at the assistant professor level or intermediate career or senior faculty members who wish to more

fully develop research in the focal areas of the Center. Pilot funding from the Center is meant to facilitate submission of proposals for external funding of fully powered research that reaches more individuals and families, which aligns with UNMC goals to increase research collaboration and extramural funding.

11. Potential for the Program to Contribute to Society and Economic Development

Development and sustainability of the Center for Patient, Family, and Community Engagement in Chronic Conditions will facilitate research into the science of self-management beyond the physical boundaries of the UNMC campus and into rural areas. While economic development is not a specific aim of the center, the innovative use of technology to deliver and monitor outcomes will yield services that will contribute to improving key health indicators in communities throughout Nebraska. Innovative technological strategies for managing chronic conditions have the potential for technology transfer and commercialization. Additionally, expansion of the research enterprise at UNMC, in collaboration with other colleges throughout the University of Nebraska system, will yield more job opportunities for members of research teams and yield positive economic benefits for the communities in which the research is being conducted. This Center is also likely to generate continuing education fees and products.

12. Consistency with Comprehensive Statewide Plan for Postsecondary Education: How this program would enhance relevant statewide goals for education.

Nebraska's Comprehensive Statewide Plan for Postsecondary Education¹⁶ includes research as its second major statewide goal, recognizing that research drives economic development, educational quality, and quality of life for Nebraskans. According to the Nebraska Coordinating Commission for Post-Secondary Education's most recent plan entitled *Comprehensive Statewide Plan for Postsecondary Education*, "Institutions will contribute to the health and prosperity of the people and to the vitality of the state through research and development efforts, technology transfer and technical assistance, and by attracting external funds to support these activities."²³

The CCCM enhances the mentoring of junior researchers. The aims of mentoring are to increase research productivity and capacity and to build a research infrastructure that facilitates interdisciplinary collaborations across the colleges, departments, and campuses of the UNMC and UN system. This formal mentoring of researchers is expected to lead to funding of further research and could potentially impact recruitment of students at various levels to the UN system.

Once fully established and self-sustaining, the CCCM will provide increased opportunities for nursing, medical, public health, pharmacy, dental, and allied health students to conduct research projects with a focus on self-management of chronic care conditions that reach urban and rural underserved populations through the use of technology.

An additional goal of Nebraska's Comprehensive Statewide Plan for Postsecondary Education is to support workforce development for the state. The plan states, "higher education in Nebraska will be responsive to the workforce development and ongoing training needs of employers and industries to help sustain a knowledgeable, trained, and skilled workforce in both rural and urban areas of the state."²³ Incorporating research, dissemination, and implementation opportunities for doctoral students in nursing and other disciplines will contribute to addressing Nebraska's nursing workforce shortage by

supporting the education of doctoral students who may choose faculty careers following graduation. These activities will enhance opportunities for doctoral students across the university and NU system to learn team science and prepare for research, practice, and academic careers that require this new approach to building and deploying new knowledge.

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TABLE 2: PROJECTED EXPENSES - NEW ORGANIZATIONAL UNIT
Center for Patient, Family and Community Engagement in Chronic Care Management

	FY 2017 Year 1		FY 2018 Year 2		FY 2019 Year 3		FY 2020 Year 4		FY 2021 Year 5		Total Cost
	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	FTE	Cost	
Personnel											
Clinical Faculty											
Research Faculty ^{1,3}	0.30	\$54,106	0.30	\$55,730	0.30	\$57,401	0.30	\$59,124	0.30	\$60,897	\$287,258
Clinical staff											
Other staff ^{2,3}	0.50	\$35,558	1.00	\$73,248	1.00	\$75,446	1.00	\$77,709	1.00	\$80,041	\$342,002
Subtotal	0.80	\$89,664	1.30	\$128,978	1.30	\$132,847	1.30	\$136,833	1.30	\$140,938	\$629,260
Operating											
General Operating ⁴		\$10,000		\$10,000		\$10,000		\$10,000		\$10,000	\$50,000
Equipment											\$0
New or renovated space											\$0
Library/Information Resources											
Other ⁵		\$95,000		\$155,000		\$155,000		\$155,000		\$155,000	\$715,000
Subtotal		\$105,000		\$165,000		\$165,000		\$165,000		\$165,000	\$765,000
Total Expenses		\$194,664		\$293,978		\$297,847		\$301,833		\$305,938	\$1,394,260

¹ College of Nursing will provide 0.30 FTE release time for Center Director Dr. Lani Zimmerman, PhD, RN, FAAN, Florence Neidfelt Professor of Nursing.

² Project Coordinator hired at 0.5 FTE initially and will increase to 1.0 FTE in year 2.

³ Annual salary increase of 3% annually. Benefits calculated at 23.2% for faculty and 29.3% for staff.

⁴ Software; Travel and honorarium for workshop speakers.

⁵ Faculty start-up funds; Grant & statistical consultations; Funding for Pilot Projects beginning in year 2.

TABLE 3: REVENUE SOURCES FOR PROJECTED EXPENSES -NEW ORGANIZATIONAL UNIT
Center for Patient, Family and Community Engagement in Chronic Care Management

Existing Funds	FY 2017 Year 1	FY 2018 Year 2	FY 2019 Year 3	FY 2020 Year 4	FY 2021 Year 5	Total
UNMC Intramural ¹	\$119,664	\$68,978	\$72,847	\$76,833	\$80,938	\$419,260
Required New Public Funds						
1. State Funds	\$0	\$0	\$0	\$0	\$0	\$0
2. Local Funds	\$0	\$0	\$0	\$0	\$0	\$0
Tuition and Fees	\$0	\$0	\$0	\$0	\$0	\$0
Other Funding ²	\$75,000	\$75,000	\$75,000	\$75,000	\$75,000	\$375,000
Philanthropic Funding ³	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$600,000
Total	\$194,664	\$293,978	\$297,847	\$301,833	\$305,938	\$1,394,260

¹ Support from the College of Nursing and the Office of Vice Chancellor for Research.

² Nebraska Tobacco Settlement Biomedical Research and Development Fund.

³ Confirmed philanthropic funding (NU Foundation).

June meeting

March 21, 2016

Dr. Michael Baumgartner
Executive Director
Coordinating Commission for
Postsecondary Education
140 N. 8th Street, Suite 300
Lincoln, NE 68509

RECEIVED

MAR 21 2016

Coordinating Commission
for Postsecondary Ed.

Dear Michael:

Enclosed is a copy of the proposal to create the Center for Patient, Family, and Community Engagement in Chronic Care Management in the College of Nursing at UNMC. The proposal was approved by the Board of Regents at the March 18, 2016 meeting.

Please do not hesitate to contact me if you have any questions.

Sincerely,



Susan M. Fritz
Executive Vice President and Provost

Enclosure

c: Chancellor Jeffrey Gold
Vice Chancellor Dele Davies
Vice Chancellor Jennifer Larsen
Dean Juliann Sebastian, College of Nursing
Associate Vice President David Jackson

TO: The Board of Regents
Academic Affairs

MEETING DATE: March 18, 2016

SUBJECT: Establishment of the Center for Patient, Family, and Community Engagement in Chronic Care Management (CCCM) in the College of Nursing at the University of Nebraska Medical Center (UNMC)

RECOMMENDED ACTION: Approval is requested to establish the Center for Patient, Family, and Community Engagement in Chronic Care Management (CCCM) in the College of Nursing at UNMC

PREVIOUS ACTION: January 20, 2006 – The Board of Regents approved amendments to Section 2.11 of the *Bylaws of the Board of Regents of the University of Nebraska* regarding Multi-Departmental Academic Centers for Research, Teaching, and/or Service

EXPLANATION: The goal of the center is to become a world leader in advancing research that can strengthen patient, family, and community engagement in management of chronic conditions. An estimated 133 million United States adults have a chronic disease and nearly 25% of those have two or more chronic diseases. Increasing rates of chronic illness are associated with higher rates of hospitalization and nearly one third of all adults discharged from hospitals are estimated to have four or more chronic illnesses. The center will provide the research infrastructure necessary to facilitate growth in externally funded interdisciplinary and collaborative studies focused on self-management of chronic health conditions.


This proposal has been reviewed by the Council of Academic Officers. This proposal also has been reviewed and recommended for approval by the Academic Affairs Committee.

PROGRAM COST: \$1,394,260 over 5 years (details on proposal page numbers 19 and 20)

SOURCE OF FUNDS: The Center will be supported by an existing fund gift at the University of Nebraska Foundation as well as research revenues from the Vice Chancellor for Research and Nebraska Tobacco Settlement Biomedical Research and Development Fund. College of Nursing funds also will support start-up and cost sharing expenses.

SPONSORS: Jennifer Larsen
Vice Chancellor for Research

Jeffrey P. Gold, Chancellor
University of Nebraska Medical Center

RECOMMENDED: 
Susan M. Fritz
Executive Vice President and Provost

DATE: February 26, 2016